Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for detecting motion and filtering noise, said method comprising:

(a) dividing an incoming image into a plurality of blocks;

(b) comparing said plurality of blocks to corresponding blocks of a referred image and saving compared results into a declared data structure;

(c) marking a compared result that exceeds a first predetermined threshold, whereby a changed block corresponding to said compared result is indicated;

(d) grouping said compared result into an adjacent region thereof, whereby changed blocks are regionally grouped together; and

(e) calculating a deviation value of said region ~~by computing~~ ~~$(\Sigma\ |x_i - x_{avg}|)/(n*x_{avg})$~~ and comparing said deviation value to a second predetermined threshold, whereby motion is detected and the noise caused from moire and an interference resulted from an area brightness variation is filtered out~~,~~.

~~where i=0 to n, n represents a quantity of said compared result in said region, x_i represents said compared result, and x_{avg} represents an average of said compared result in said region.~~

2. (original) The method according to claim 1, wherein a size of said plurality of blocks is 1%~4% of said incoming image.

3. (original) The method according to claim 1, wherein step (b) comprises the comparing step as follows:

$$(\sqrt{\ }(\Sigma\ (a_i-b_i)^2))/(m*m),$$

where i=0 to m*m, m represents a side of said plurality of blocks, and a_i and b_i respectively represent a pixel value of a corresponding block of said incoming image and said referred image.

4. (original) The method according to claim 3, wherein said referred image is a prior image to said incoming image.

5. (original) The method according to claim 3, wherein said referred image is a later image to said incoming image.

6. (original) The method according to claim 1, wherein said first predetermined threshold is 1.

7. (original) The method according to claim 1, wherein step (d) comprises employing a double linked list to group said compared result.

8. (cancelled).

9. (original) The method according to claim 1, wherein said second predetermined threshold is 0.35.

10. (currently amended) A computer-readable medium encoded with computer program code for detecting motion and filtering noise, the program code causing a computer to execute a method comprising:

(a) dividing an incoming image into a plurality of blocks;

(b) comparing said plurality of blocks to corresponding blocks of a referred image and saving compared results into a declared data structure;

(c) marking a compared result that exceeds a first predetermined threshold, whereby a changed block corresponding to said compared result is indicated;

(d) grouping said compared result into an adjacent region thereof, whereby changed blocks are regionally grouped together; and

(e) calculating a deviation value of said region ~~by computing $(\Sigma\ |x_i - x_{avg}|)/(n*x_{avg})$~~ and comparing said deviation value to a second predetermined threshold, whereby motion is detected and the noise caused from moire and an interference resulted from an area brightness variation is filtered out~~,~~.

~~where i=0 to n, n represents a quantity of said compared result in said region, x_i represents said compared result, and x_{avg} represents an average of said compared result in said region.~~

11. (original) The medium according to claim 10, wherein a size of said plurality of blocks is 1%~4% of said incoming image.

12. (original) The medium according to claim 10, wherein step (b) comprises the comparing process as follows:

$$(\sqrt{\ }\ (\Sigma\ (a_i - b_i)^2))/(m*m),$$

where i=0 to m*m, m represents a side of said plurality of blocks, and a_i and b_i respectively represent a pixel value of a corresponding block of said incoming image and said referred image.

13. (original) The method according to claim 12, wherein said referred image is a prior image to said incoming image.

14. (original) The method according to claim 12, wherein said referred image is a later image to said incoming image.

15. (original) The medium according to claim 10, wherein said first predetermined threshold is 1.

16. (original) The medium according to claim 10, wherein step (d) comprises employing a double linked list to group said compared result.

17. (cancelled).

18. (original) The medium according to claim 10, wherein said second predetermined threshold is 0.35.

19. (new) The method according to claim 1, wherein step (e) comprises the calculating step as follows:

$$(\Sigma\ |x_i - x_{avg}|)/(n * x_{avg}),$$

where i=0 to n, n represents a quantity of said compared result in said region, x_i represents said compared result, and x_{avg} represents an average of said compared result in said region.

20. (new) The medium according to claim 10, wherein step (e) comprises the calculating step as follows:

$$(\Sigma\ |x_i - x_{avg}|)/(n * x_{avg}),$$

where i=0 to n, n represents a quantity of said compared result in said region, x_i represents said compared result, and x_{avg} represents an average of said compared result in said region.